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ment is disposed at a location selected from the group consisting of inside one of said plurality of external substrate surfaces and on one of said plurality of external substrate surfaces, wherein said first electrical conductor comprises a first bump contact, wherein said first bump contact is on one of said plurality of external substrate surfaces, wherein said first electrical conductor comprises a first end, wherein said first electrical conductor is electrically insulated from said substrate, wherein said second electrical conductor comprises a second bump contact, wherein said second electrical conductor comprises a second end, wherein said second bump contact is on one of said plurality of external substrate surfaces, wherein said second electrical conductor is electrically insulated from said substrate, wherein said second electrical conductor is electrically insulated from said first electrical conductor except at said second end of the second conductor, wherein said second end of the second conductor is mechanically and electrically directly in contact with said first end of the first conductor to form an electrical junction, wherein said first and second ends are entirely buried to at least 5  $\mu\text{m}$  deep inside said substrate relative to one of said plurality of external substrate surfaces, wherein said first and second ends are formed of different materials chosen to achieve a Seebeck coefficient of said junction having an absolute value that is greater than 1  $\mu\text{V/K}$  at 20° C., and wherein a combination of said first and second conductors forms a temperature probe.

2. The apparatus of claim 1, wherein said integrated circuit further comprises a blind via formed in a face of said substrate, wherein said first electrical conductor comprises a first extension that is driven into said substrate to electrically connect said first end to said first bump contact, wherein said second electrical conductor comprises a second extension that is driven into said substrate to electrically connect said second end to said second bump contact, wherein said first extension comprises a first cylinder, wherein said first cylinder has a first distal end that is buried into said substrate by said via to a depth of at least five micrometers, wherein said second extension comprises a second cylinder, wherein said second cylinder has a second distal end that is buried into said substrate by said via to a depth of at least five micrometers, wherein said first distal end is made of said first material, wherein said second distal end is made of said second material, wherein said first distal end forms said first buried end of said first electrical conductor, wherein said second distal end forms said second buried end of said second electrical conductor, wherein said first cylinder extends inside said via from said face of said substrate to said first end, wherein said second cylinder extends inside said via from said face of said substrate to said first end, and wherein said integrated circuit further comprises a layer of electrical insulator situated everywhere between said first and second cylinders except between said first and second ends.

3. The apparatus of claim 2, wherein said substrate forms a first substrate having a top face, and said circuit comprises a second substrate having a bottom face directly joined to said top face of said first substrate and a top face on a side opposite said bottom face, wherein said first and second substrates are joined together forming, respectively, first and second layers of a third, thicker substrate, wherein said layers extend essentially parallel to a plane of said third substrate, wherein said blind via is formed from said face or faces of said first substrate, and said second substrate comprising third and fourth bump contacts are arranged on said top face and are electrically connected, respectively, to said first and second bump contacts.

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4. The apparatus of claim 1, wherein said first electrical conductor comprises a first extension driven into said substrate to electrically connect said first end to said first bump contact, wherein said first electrical conductor comprises a first extension driven into said substrate to electrically connect said first end to said first bump contact, wherein said second electrical conductor comprises a second extension driven into said substrate to electrically connect said second end to said second bump contact, wherein said second electrical conductor comprises a second extension driven into said substrate to electrically connect said second end to said second bump contact, wherein said first extension comprises a first cylinder, wherein said first cylinder has a distal end, wherein said distal end is buried inside said substrate, wherein said distal end is made of said first material, to form said first end of said first electrical conductor, wherein said first cylinder extends inside a first via formed from a first face of said substrate to said first end, wherein said second extension comprises a second cylinder, wherein a distal end of said second cylinder is buried inside said substrate, wherein said distal end is produced from said second material to form said second end of said second electrical conductor, wherein said second cylinder extends inside a second via to said second end, wherein said second via is formed from a second face of said substrate, wherein said second face is situated on a side opposite said first face, and wherein a bottom of said second via emerges on said first end of said first cylinder.

5. The apparatus of claim 4, wherein said substrate defines a first substrate having a top face, and said integrated circuit further comprises a second substrate having a bottom face directly joined to said top face of said first substrate and a top face on a side opposite said bottom face, wherein said first and second substrates are joined together forming, respectively, first and second layers of a third, thicker substrate, wherein said layers extend essentially parallel to a plane of said third substrate, wherein said first and second vias are formed from said face or faces of said first substrate, and said second substrate comprising third and fourth bump contacts are arranged on said top face and are electrically connected, respectively, to said first and second bump contacts.

6. The apparatus of claim 1, wherein said substrate comprises at least one first layer having a top face and one second layer having a bottom face assembled directly on said top face of said first layer, said layers extending essentially parallel to said plane of said substrate, wherein said first and second electrical conductors comprise, respectively, first and a second conductive tracks produced on said top face of said first layer or on said bottom face of said second layer and extending essentially parallel to said plane of said substrate, wherein distal ends of said tracks are situated between said first and second layers, wherein said distal ends of said tracks form, respectively, said buried first and second ends of said first and second electrical conductors.

7. The apparatus of claim 6, wherein said first and second conductors comprise, respectively, first and a second extensions driven into said substrate to electrically connect said first and second tracks, respectively, to said first and second bump contacts, at least one of said extensions being formed by a via passing through one of said first and said second layers.

8. The apparatus of claim 6, wherein said distal ends of said first and second tracks overlap one another in a direction at right angles to said plane of said substrate.